

REMARKS/ARGUMENTS

In response to the Office Action mailed March 22, 2006, Applicants amend their application and request reconsideration. Claims 2-4 are cancelled in this Amendment so that claims 1 and 5-8 remain pending.

The Examiner's comments concerning the missing certified copy of Japanese Patent Application 2003-042925 are noted. A certified copy of that patent application was filed simultaneously with the patent application but is not in the image file wrapper, demonstrating that the certified copy was lost at the U.S. Patent and Trademark Office. As proof of the filing of both priority documents, attached are photocopies of the postcard receipts showing that two priority documents were filed and of the first two pages of those certified copies that were prepared and placed in the file of Applicants' representative. Complete photocopies of these documents are not prepared nor kept by Applicants' representative. Since these attachments prove the filing of the certified copy of JP 2003-042925, acknowledgement of receipt of all of the priority documents in the next communication is respectfully requested.

Claims 7 and 8 were stated to be allowable if claim 7 were rewritten in independent form. Claim 7 has been rewritten in independent form with some minor, non-substantive clarifications. Therefore, claims 7 and 8 should now be allowed.

Examined claims 1 and 3 were rejected as anticipated by Harman et al. (U.S. Patent 5,353,496, hereinafter Harman) and examined claims 2 and 4-6 were rejected as unpatentable over Harman. To the extent applicable to any of the claims now pending, these rejections are respectfully traversed.

In this Amendment, claim 1 has amended to describe, in place of the raising and lowering means, the use of a passive elastic body between the receiver platform of the heat exchanger tube expanding apparatus and the fin receiver. This language is consistent with the description in the patent application of the embodiments of the apparatus illustrated in Figures 11 and 12 and described at pages 17 and 18 of the patent application. The embodiment of Figure 11 includes a coil spring as the passive elastic body, just as described in amended claim 5. Claim 6 is supported by the description of

Figure 12 and describes the passive elastic body as tubular foamed resin. In view of the comments in the Office Action, the Examiner might consider rejecting amended claim 1 and its dependent claims 5 and 6 as obvious over Harman. Applicants respectfully traverse, in advance, such a rejection.

The invention concerns an apparatus for forming a heat exchanger tube arrangement including a plurality of fins mounted on tubes that have hairpin turns. Harman describes an apparatus directed to the same end. In the Harman apparatus, a number of elements, such as the support plate 58, are driven by servomotors through pulleys or timing belts that turn screws. Harman provides an extensive description not only of the construction of his apparatus, but also its method of operation, particularly in the portion of Harman cited by the Examiner, namely column 7, line 44 through column 8, line 15. According to that description, during the shrinkage of the length of the tubes as the tubes are expanded,

“the height of the fin pack AF will remain unchanged or actually grow, or decrease depending on the size of the fin pack AF to be assembled and the parameters at which the machine is set. Therefore, in situations where the fin pack will grow in height, the rate at which the support plate 58 advances toward the receiver 11 will differ from the rate at which the stripper plate 43 is moved toward the receiver 11. To compensate for the tube shrinkage rate and the fin pack growth rate is easily handled by the preprogrammed variation in rates of movement of the support plate 58 and stripper plate 43.” [Harman at column 8, lines 16-27.]

In other words, in the quoted passage of Harman as well as in other passages of Harman, such as column 7, lines 63-67, column 8, lines 37-40, and column 10, lines 62-64, as well as claim 1 of Harman, it is apparent that Harman requires active control of relative movements of parts of his tube expander apparatus. This description clearly teaches against the interposition of a passive elastic body, such as a coil spring, between the fin receiver and the receiver platform, elements 58 and 15 of Figure 3 of Harman. In other words, it would not have been obvious to replace the complex computer-controlled driving mechanisms of Harman with the passive elastic body disposed between the fin

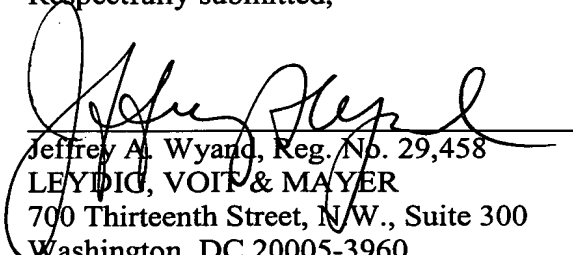
receiver and the receiver platform as described in amended claim 1 and its dependent claims 5 and 6.

By contrast with the computer-controlled drivers of Harman, Harman does employ a passive elastic body, namely a spring 48, between his stripper plate 43 and final expander plate 26. Since Harman recognizes these different passive and active features and their different characteristics, he cannot have confused passive elastic bodies and active pressure-resisting elements. This internal distinction further demonstrates that Harman teaches against the structure of the apparatus described in the claims now presented.

Moreover, contrary to the comments in the Office Action with regard to the rejection of claim 6, there is no teaching in Harman nor any suggestion for the use of a resinous elastic body, as a passive elastic body. If it is assumed, for the sake of argument, that Harman suggested a passive elastic body, then the only basis for asserting that one of skill in the art would make that body of a resin in order to reduce costs is the teaching of the present patent application, a prohibited source of prior art. Claim 6 is clearly patentable even if claim 1 were not patentable.

Reconsideration and allowance of all claims now pending are earnestly solicited.

Respectfully submitted,


Jeffrey A. Wyand, Reg. No. 29,458
LEYDIG, VOIT & MAYER
700 Thirteenth Street, N.W., Suite 300
Washington, DC 20005-3960
(202) 737-6770 (telephone)
(202) 737-6776 (facsimile)

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JAW:yes